

REMARKS

This is in response to the non-final Official Action currently outstanding with regard to the present application.

Claims 1-17 were pending in this application at the time of the issuance of the currently outstanding Official Action. By the foregoing Amendment, the specification of this application has been extensively amended, but no Claims have been amended, canceled or withdrawn. Accordingly, upon the entry of the foregoing amendment, Claims 1-17 will constitute the Claims under active prosecution in this application.

The claims of this application as they will stand upon the entry of this Amendment are the same as the Claims as originally filed with this application. Accordingly, it is Applicants' belief that it is not required that the presently pending claims be reproduced in this Amendment.

More particularly, in the currently outstanding Official Action the Examiner has:

1. Acknowledged Applicants' claim for foreign priority under 35 USC 119 (a)-(d) or (f),
and confirmed the receipt of the required copies of the priority documents by the United States Patent and Trademark Office;
2. Objected to the drawings as filed with this application on the basis that the reference numerals 4, 5 and 6 mentioned in the specification are not shown in the drawings;
3. Acknowledged her consideration of the Information Disclosure Statement filed in this application by providing the Applicants with a copy of the Form PTO-1449 that accompanied that Statement duly signed, dated and initialed to confirm the consideration of the art listed therein;

4. Objected to the specification as filed on the grounds that the reference numerals 1, 2 and 3 each are used in association with more than one element/feature of the invention as described therein;
5. Requested confirmation that the inventions of each of the claims were commonly owned at the time(s) that they were made;
6. Rejected Claim 1 under 35 USC 103(a) as being unpatentable over the Hirai et al. reference (US Patent 6,148,168) in view of the Deki et al reference (US Patent 5,740,492);
7. Rejected Claims 2, 3, 10 and 11 under 35 USC 103(a) as being unpatentable over the Hirai et al. reference (US Patent 6,148,168) in view of the Udaka et al reference (US Patent 6,687,472) further in view of the Deki et al reference (US Patent 5,740,492) ; and
8. Indicated that Claims 4-9 and 12-17 are objected to as being dependent upon a rejected base claim, but that those claims would be allowable if rewritten in independent form including all of the limitations of their respective base claims and any intervening claims.

No further comment regarding items 1 and 3 above is deemed to be required in these Remarks.

With regard to item 5, Applicants respectfully confirm that the inventions of all of the claims of this application were commonly owned at the time(s) that they were made.

With regard to items 2 and 4 above, Applicants by the foregoing Amendment have amended the present specification so as to utilize the appropriate letters “a”, “b”, “c” and “d” with the reference numerals 1, 2, 3, 4, 5, and 6 used therein. Applicants respectfully submit that the foregoing Amendment removes the bases for the Examiner’s objection to the drawings because the reference numerals 4a, 4b, 4c, 4d, 5a, 5b, 5c, 5d, 6a, 6b, 6c, and 6d utilized in the drawings now conform to the usage of those reference numerals in the specification (i.e., the reference numerals 4, 5 and 6 have been canceled from the specification in favor of the reference numerals 4a, 4b, 4c, 4d, 5a, 5b, 5c, 5d, 6a, 6b, 6c, and 6d that appear in the drawings – in some instances via the shorthand 4a to 4d, 5a to 5d or 6a to 6d).

Similarly, the usage of the reference numerals 1, 2 and 3 in the specification with respect to the light exposure units, the developing devices and the photoconductor drums respectively now have been corrected to recite the reference numerals 1a, 1b, 1c, 1d, 2a, 2b, 2c, 2d, 3a, 3b, 3c, and 3d in conformity with the drawings (in some instances via the shorthand statements 1a to 1d, 2a to 2d, or 3a to 3d). Accordingly, Applicants respectfully submit that there no longer can be any chance of confusion between the light exposure units; the developing devices and the photoconductor drums on the one hand, and the detection patterns shown in the drawings on the other hand arising from the use of the same reference numeral to refer to two different elements/features of the present invention.

Therefore, in view of the foregoing Amendment, Applicants respectfully submit that the bases of the Examiner’s objections to the specification and to the drawings are now moot and should be withdrawn. A decision so holding in response to this communication is respectfully requested.

With respect to items 6 and 7, the Examiner’s currently outstanding substantive rejections under 35 UDC 103(a) hinge upon what Applicants respectfully submit is an erroneous construction of the disclosure of the Deki et al reference. Thus, the Examiner asserts that the Deki et al reference “discloses an image forming method including the step of stopping operations other than a control operation of a sensor and accepting the results of the sensor when a detection operation is being performed (col. 3, lines 26-29; and col. 7 line 58-col 8, line 32)”. In fact, however, that is not what the Deki et al reference discloses at all.

Instead, the Deki et al reference is concerned with detrimental effects of vibrations caused by the startup or termination of an “actuator” such as a driving motor upon the ongoing positional relationships between the optical detection device 22 and the various detecting marks 23 on the intermediate transfer belt driven by the support roller 11. More particularly, in the Deki et al apparatus, the timing between detections of the detecting marks 23 on the intermediate transfer belt by the detector 22 is monitored, and if that timing is detected to be outside of a predetermined range either an error signal is provided to the operator, the device is stopped, or both (see col. 9, lines 35-65). Accordingly, it should be understood that the portion of the Deki et al reference to which the Examiner refers deals with the concept of the Deki et al reference that the detection of the detecting marks 23 by the detector 22 is sensitive to the startup or the termination of the operation of an actuator such as a driving motor, not the ongoing operation of such an actuator.

Therefore, Deki et al provide masking periods overlapping the detection periods during which actuator startup or termination of operation cannot occur. However, it is clear that this is not the same thing as a stoppage of the operation of the apparatus during the various detection periods. Rather, it is a provision that prevents the startup or termination of an actuator in the normal course of the operation of the device during periods overlapping the detection periods associated with each detecting mark 23. In other words, as far as the Deki et al disclosure is concerned, the operation of the apparatus is continuously ongoing both between and during periods of detection of the marks 23 by the detector 22 with the sole exception that an actuator cannot be started or stopped during one of the masking periods that overlap each detecting period.

The foregoing mode of operation is totally different in concept and application from the present invention wherein all apparatus operation other than that associated directly with the control and acceptance of detection by the sensor is stopped during the periods in which detection occurs. In other words, Applicants respectfully submit that the portion of the Deki et al disclosure relied upon by the Examiner does not teach, disclose or suggest that all operations performed by the apparatus other than those directly associated with detection should be stopped during those periods when detection occurs. Instead, the Deki et al reference teaches that the ongoing operation of the apparatus should continue until such time as an excessive difference between detections of the respective marks 23 are detected with the sole exception that a vibration causing startup of stoppage of an actuator associated with a drive or the like should be prevented during periods that overlap and include the periods during which the detector 22 is detecting the detecting marks 23.

Accordingly, Applicants respectfully submit that the combination of references relied upon by the Examiner is inadequate to render the present claims of this application unpatentable, i.e., the Examiner has not presented a viable *prima facie* case justifying his rejection of the presently pending claims under 35 USC 103(a). Therefore, reconsideration and a decision allowing Claims 1-17 as originally filed in response to this communication is respectfully requested.

Applicant also believes that additional fees beyond those submitted herewith are not required in connection with the consideration of this response to the currently outstanding Official Action. However, if for any reason a fee is required, a fee paid is inadequate or credit is owed for any excess fee paid, you are hereby authorized and requested to charge and/or credit Deposit Account No. 04-1105, as necessary, for the correct payment of all fees which may be due in connection with the filing and consideration of this communication.

Respectfully submitted,

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SIGNATURE OF PRACTITIONER

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